The Life-History and Anatomy of Butterflies

FIG. 10.—Egg of *Orgyia antiqua*, laid in string-like clusters on the

pillar, after it is hatched, is destined to live, and the female reveals wonderful instinct in selecting plants which are appropriate to the development of the larva. As a rule, the larvae are restricted in the range of their food-plants to certain genera, or families of plants.

FIG. 11.—Upper Eggs of *Vanessa Pieris* and

The eggs are deposited sometimes singly, sometimes in small clusters, sometimes in a mass. Fertile eggs, a few days after they have been deposited, frequently undergo a change of color, and it is often possible with a magnifying-glass to see through the thin shell the form of the minute caterpillar which is being developed within the egg. Unfruitful eggs generallyshrivel and dry up after the lapse of ashorttime.

The period of time requisite for the development of the embryo in the egg varies. Many butterflies are single-brooded; others produce two orthree generations during the summer in temperate climates, and even more generations in subtropical or tropical climates. In such cases an interval of only a few days, or weeks at the most, separates the time when the egg was deposited and the time when the larva is hatched. When the period of hatching, or emergence, has arrived, the little caterpillar cuts its way forth from the egg through an opening made either at the side or on the top. Many species have eggs which appearto be provided with a lid, a portion of the shell being separated from the remainder by a thin section, which, when the caterpillar has reached the full limit allowed by the egg, breaks under the pressure of the enlarging embryo within, one portion of the egg flying off, the remainder adhering to the lfcaf or twig upon which it has been deposited.

CATERPILLARS

Structure, Form, Color, etc.—The second stage in which the insects we are studying exist is known as the larval stage. The insect is known as a larva, or a caterpillar* In general cater-